

Helping Customers Innovate, Improve & Grow



OX-501

Features

- 6-Pin SMD package
- Fast warm-up
- Frequency Range, 10 MHz to 40 MHz
- Standard freq: 10, 12.8, 16.384, 19.2, 20, 24.576, 25, 26, MHz,

Applications

- Base stations
- Test equipment
- Femto base station
- Military communication equipment

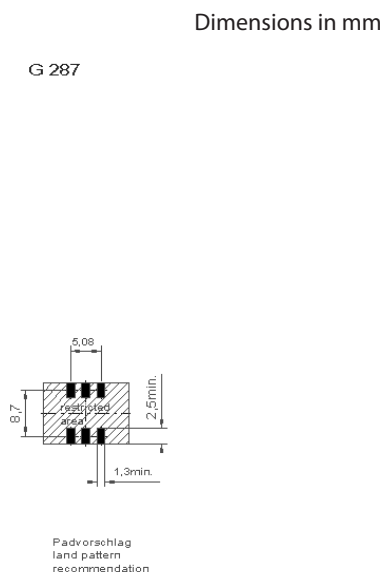
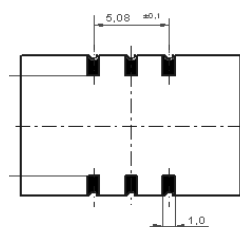
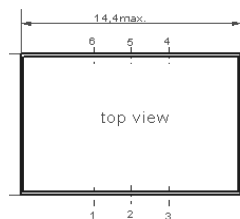
Performance Specifications

Frequency Stabilities ¹ 10 to 40 MHz						
Parameter	Min	Typical	Max	Units	Condition	Options ⁵
vs. operating temperature range (referenced to +25°C)	-20 -20		+20 +20	ppb ppb	-20 to +70°C -40 to +85°C	
slope	-2		+2	ppb/°C	@ Temp stab. +-10ppb	
Initial tolerance	-0.5		+0.5	ppm	at time of shipment, nominal EFC	
vs. supply voltage change	-20		+20	ppb	V _s ±5% static	
vs. load change	-30		+30	ppb	Load ±5% static	
vs. aging / day	-5		+5	ppb	after 30 days of operation	
vs. aging / year	500		+500	ppb	after 30 days of operation	
vs. aging / 10 years					after 30 days of operation	
Holdover						
Start up time						
Warm-up time			3	minutes	to ±200ppb of final frequency (1 hour reading) @ +25°C	

Performance Specifications

Supply Voltage (Vs)						
Parameter	Min	Typical	Max	Units	Condition	
Supply voltage (standard)	3.135	3.3	3.465	VDC		
Power consumption		1.4	2.0	Watts	during warm-up	
		0.5	0.66	Watts	steady state @ +25°C	
RF Output						
Signal [standard]	HCMOS					
Load		15		pF		
Signal Level (Vol)			0.4	VDC	with Vs=3.3V and 15pF Load	
Signal Level (Voh)	2.4			VDC	with Vs=3.3V and 15pF Load	
Duty Cycle	45		55	%	@ (Voh-Vol)/2	
Frequency Tuning (EFC)						
Tuning Range	Fixed OCXO; No adjust					Opti- on ⁵
Tuning Range	±5		±12			
Linearity	10%					
Tuning Slope	Positive					
Control Voltage Range	0.0	1.4	2.8	VDC	with Vs=3.3V	
Additional Parameters						
Phase Noise ³		-60	-45	dBc/Hz	1 Hz	@ 20MHz
		-100	-95	dBc/Hz	10 Hz	
		-128	-120	dBc/Hz	100 Hz	
		-140	-135	dBc/Hz	1 kHz	
		-148	-145	dBc/Hz	10 kHz	
Weight			8.0	g		
Processing & Packing	Handling & Processing Note					
Absolute Maximum Ratings						
Supply voltage (Vs)			4.0	V	with Vs=3.3 VDC	
Output Load			50	pF		
Operable Temperature Range	-40		+85	°C		
Storage Temperature Range	-40		+85	°C		

Outline Drawing / Enclosure



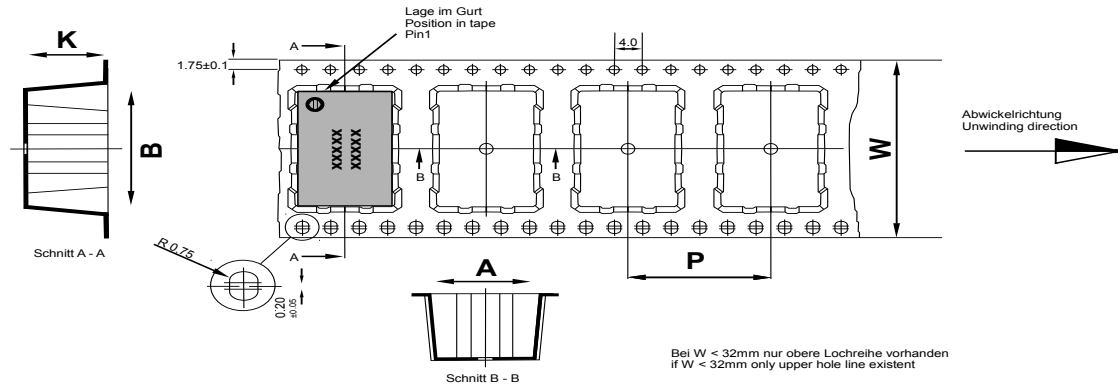
Dimensions in mm

OX-501	
Height "H"	cover material
6.2	plastic

Pin Connections	
1	I.C (Do not connect) / EFC (option)
2	N.C
3	Ground (Case)
4	RF Output
5	N.C / Enable (option)
6	Supply Voltage Input

Enable true table	
pin 5	pin 4
high	data
open	data
low	high tristate

Standard Shipping Method (OX-501)



Maßangaben in mm:

A, B und K Maße von Bauelement abhängig

Fertigungstoleranzen entsprechen der DIN IEC 286-3

Dimension in mm:

A, B und K are dependent upon component dimensions

production tolerance complying DIN IEC 286-3

All dimensions in millimeters unless otherwise stated

Enclosure Type	Tape Width W (mm)	Quantity per meter	Quantity per reel	Dimension P
OX-5011 (6.2 mm)	24	83.5	850	12

Reflow Profile

IPC/JEDEC J-STD-020 (latest revision)

Additional Information:

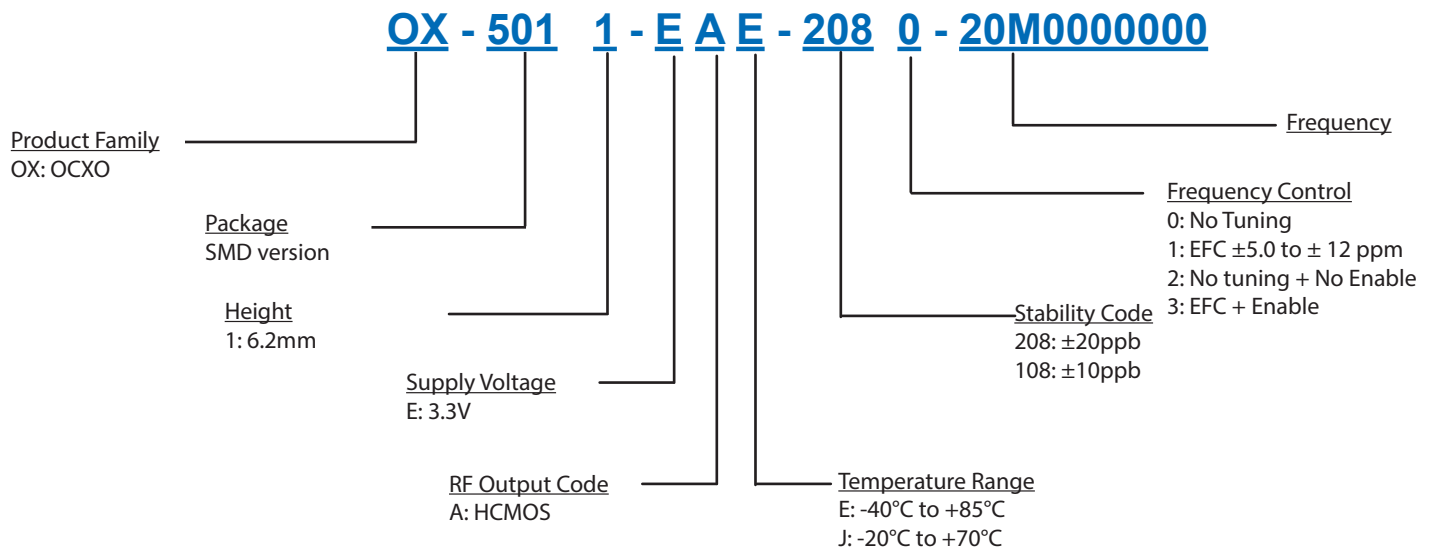
This SMD oscillator has been designed for pick and place reflow soldering.

SMD oscillators must be on the top side of the PCB during the reflow process.

Additional Environmental Conditions

Parameter	Description
Rapid temperature changes	MIL-883-1010 Cond B 500 cycles -55/125C
Vibration	MIL-STD-883 Meth 2007 Cond A 20G 20-2000Hz 4x in each 3axis 4 min
Shock	JESD22-B104-B 200G 1,5ms 6 shocks in each direction
Solderability	J_STD_002C Cond A, Through hole device/ Cond. B, SMD 255C (diving time 50,5sec.) Dip+Look with 8h damp pre-treatment: solder wetting >95%
Solvent resistance	MIL-STD-883 Meth 2015 Solv. 1,3,4
ESD	HBM JESD22-A114-E Class 2 10* 2000V
Moisture Sensit.	Level 1 JESD22-A113-B
RoHS compliance	100% RoHS 6 compliant
Washable	non-washable device

Ordering Information



Notes:

1. Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
2. Unless other stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C).
3. Phase noise degrades with increasing output frequency.
4. Subject to technical modification.
5. Contact factory for availability.

For Additional Information, Please Contact

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